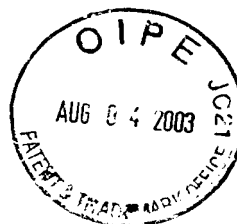


SEQUENCE LISTING



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<110> THE JOHNS HOPKINS UNIVERSITY
GOGGINS, Michael G.
UEKI, Takashi

<120> DIFFERENTIALLY METHYLATED SEQUENCES IN PANCREATIC CANCER

<130> JHU1700-1

<140> US 10/084,555

<141> 2002-02-25

<150> US 60/271,268

<151> 2001-02-23

<160> 118

<170> PatentIn version 3.1

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<211> 337
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 gattctggtc acagcagggg ctgggtttct aaggcagggt tctaagggtg ctccctacag 180
 acaccgctgc tgctaccttg ctaccttcag cgctgggcac agccaggggc agcgcgagag 240
 ggaggcaacg agaggggttc cggg 264

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 <213> Homo sapiens

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 catagcctcc tacagtgaga aacgcccccc acccgacgct gcgctcatct gtgtccccgc 180
 tggtgcccgg gctctggtat ccacttgccg gccctatgtg gtggggatcc acccagagcc 240
 cagcgtcaag ttatacgggc gcttcaactca gcgtcagcca agaccagga agcgcttctt 300
 gccgtttagg agacgtctgc aagagataaa aagctagccc acgatccacc cacaatcttc 360
 gtgtccccgg g 371

<210> 31
 <211> 179
 <212> DNA
 <213> Homo sapiens

<400> 31
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 cagggccacg gcgaggacgg gcactgggtca gattccggac aggcgggtcct ggccccggg 179

<210> 32
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 <212> DNA
 <213> Homo sapiens

<400> 32
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 agaaggcgag gatgcgcgcg tacttcgtgt ccttgggtct atcgtcacgt gtgagtatcg 180
 accaggtcat catcgcacgt ggtaccatag tggaagtagt tggcaaactc gctagagtct 240
 gctggaggaa cgagcccgcc gtaggacgga cacacctgag tgccccctcc acgcgagccc 300
 aaagcgggtg cagggcacct cccaccacat ttctggccaa agttcccatt tgaggccccg 360
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 acctgacccc acccaccac ccggg 445

<210> 33
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 <212> DNA
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 ctcccattta tagctcagtt tccactgagc gcagtccctc taggacctgg gctgagcaag 120
 tttcttcac tctctccctt cctcctcct cacccttgc ctgccccca accccggcag 180
 ggcgaggtg tccaaccag ccgggacccc ctccctctc gaaccaggt gttccggctc 240
 ccagaccca attgagctgg gggcgcccac ccgcccggg atcccgcct gcgtcccca 300
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<210> 34
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 <212> DNA
 <213> Homo sapiens

<400> 34
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 cctggccagg gacggggtcg tccgaactgc cgtccagatt cccaaggga gacaaagacc 120
 cgaaacacag ctcaaagttt ccgagagcag tcacagcggg gccagggact ccagaagtgt 180

cagctccaac gactccagag ctgcacactg gcctctattc cccacccgcaa agccccagag 240
 ccgcagagagac ttccaaggca gccggagagg agagggccca ccgagcacta cggcgggtgc 300
 gcaagccccg gg 312

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 <212> DNA
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 ctgacgtctg ggctggggag gagcgggtcc gagcgaggac ggagagggga cagagggaaa 180
 gggagggcggg tgtcttcctc aggaatttga gctggggatc tgcctcctgg ccattgcagt 240
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 ggagagcccc gg 372

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 <212> DNA
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 gccccgcgc tcctcactta ccttgccctt agctatcaat tccatgatgt agccaaatc 180
 actcatctcc ccagactccg acatgtttac accccttcac aaactctgga ggaccgacgc 240
 ggggtgtatcg aatttgctct ttcttttctc tttttctggt tttagtctga gttttgccga 300
 gctcccgcgc cataagctgt taaccaggaa aagaggggaa gcgcggggga aagcaagaag 360
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<210> 37
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 <212> DNA
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 tgtcttcggg gaaaaccaagt ctgagtgagc gctgaagggg agtgtgcgga gcgtgccgtg 180

caccccgagc ccccgccctc attgcctctc gcctctctcc acctgcccc a tgatctgcgc 240
 cagggaccgg tcctctcccg tccgcagget gtctaggtgg ccgttctggt ttgctggggac 300
 ccccggg 307

<210> 38
 <211> 331
 <212> DNA
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 ggcggggaag ggcgatctga cgatcagga gttgcgcccc tctctctggg cctcgtgaag 180
 gaacaagagc aattacagcg ctgggcccgc cacgtagtcc tggggctagg tgggcccatt 240
 gctccggggc ggggggctgg agcgcggagg ctggagaggg aggaggaccc tccgcggctc 300
 caggtctccc agctggaggc tcacgcccgg g 331

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 <212> DNA
 <213> Homo sapiens

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 tcttcgggga aaccaagtct gagtgcgcgc tgaaggggag tgtgcggagc cgtgccgtgc 180
 accccgagcc ccccgccctca ttgcctctcg cctctctcca cctgccccat gatctgcgcc 240
 agggagccgg tcctctcccg tccgcagctg tctaggtggc cggttctggtt tgctggggcc 300
 cggg 304

<210> 40
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 <212> DNA
 <213> Homo sapiens

<400> 40
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 tcggggtgca cggcacgctc cgcacactcc cctccagcgc tcaactcagac ttggtttccc 180
 cgaagacaca ctctcgtccc cgccgcgtga ttgcccactc cttccgcctg cactccagcc 240
 tccttctcac ctttctctcg agcgcacagg cggtgcgcaa gtccgcaccg gtgcgcaccg 300

gccccggg

307

<210> 41
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 <212> DNA
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<400> 41
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 gagaaggagg caggagtgcg gccggaagga gtgggcaatc agcggcggga cgagagtgtg 120
 tcttcgggga aaccaagtct gagtgagcgc tgaaggggag tgtgcggagc cgtgccgtgc 180
 accccagagcc ccccgcccca ttgcctctcg cctctctcca cctgccccat gatctgcgcc 240
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 cggg 304

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<220>
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 ttcctgggct ggggacagtg aggtcatcgc tgcccatcct ggagctctgg ctcccttcgg 180
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 gagcaggggg tttgagccct tgtggaaatc tggggaggca ctgcttctcc ctccatgtga 420
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<220>
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<400> 43

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<400> 44
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<210> 45
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<220>
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<400> 45
 ctccctccaa ataaatactt ac 22

<210> 46
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<220>
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<400> 46
 agagaggagt ttagattgg 19

<210> 47
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<400> 47
 caaaaaaact aaaacctcaa c 21

<210> 48
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<220>
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<400> 48
 tggataaagg atgtttgggg ttg 24

<210> 49
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<400> 49
 cgcctcccccctt acccctaaat cc 22

<210> 50
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<220>
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<400> 50
 actcccccttc actttatctc 19

<210> 51
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<220>
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<400> 51
 attatttttag tagaggtata taag 24

<210> 52
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<220>
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<400> 52
 ccaaccccac ccttcaac 18

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<400> 53
 aagagagggt tggagagtag 20

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<400> 54
 ccccttaaaaa aaaaatcaaa aatc

24

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<400> 55
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21

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26

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<400> 57
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23

<210> 58
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<400> 58
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25

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 cagcccctcac ttctactaaaa c

21

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23

<210> 61
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<400> 61
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24

<210> 62
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<400> 62
 ttattagagg gtgggggtgga ttgt

24

<210> 63
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<400> 63
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24

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<400> 65
 ggattgggat gtcgagaac 19

<210> 66
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<400> 66
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<400> 67
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<400> 68
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<400> 69
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<400> 70
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<220>
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<400> 71
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<210> 72
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<400> 72
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<400> 73
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<210> 74
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<220>

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<400> 74

ttaataggaa gagtggatag tg

22

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<400> 75

tctataaatt actaaatctc ttca

24

<210> 76

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ttaataggaa gagcggatag c

21

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<223> PCR primer

<400> 78

taattttagg ttagagggtt attgt

25

<210> 79

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<212> DNA

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 <400> 80
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 <210> 81
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 <400> 81
 taactaaaaa ttcacctacc gac 23

 <210> 82
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 <400> 84
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 <400> 85
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 <210> 88
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 <400> 88
 tttcgacgtt cgtacctttt cgc 23

 <210> 89
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<400> 89

gcactcttcc gaaaacgaaa cg

22

<210> 90

<211> 22

<212> DNA

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22

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<213> Artificial sequence

<220>

<223> PCR primer

<400> 91

ttcacaaacct caaatctact tca

23

<210> 92

<211> 21

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ggggttgaggt tttttgtag c

21

<210> 93

<211> 20

<212> DNA

<213> Artificial sequence

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<210> 94

<211> 25

<212> DNA

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ggtgttggtta aatgtaaata atttg 25

<210> 95
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<400> 95
aaaaaaaaac acctaaaact ca 22

<210> 95
<211> 21
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<400> 95
aatcgaattt gtcgtcgttt c 21

<210> 97
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<400> 97
aaataaataa ataaaaaaaaa acgcg 25

<210> 98
<211> 26
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<400> 98
gaattgagat gattttaatt ttttgt 26

<210> 99
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<400> 99
 ctaaaaccat caccctaata ca 22

<210> 100
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<400> 100
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<210> 101
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<400> 101
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<210> 102
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<400> 102
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<210> 103
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<220>
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<400> 103
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<210> 104
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<400> 104

gtgggtagag gaatttaggc

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<210> 105
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<220>
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<400> 105
 aaaacgaag aaacgtccg

19

<210> 106
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<220>
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<400> 106
 acttcatta aaaacaacta c

21

<210> 107
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<400> 107
 caaccccaaa cccacaacca taa

23

<210> 108
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 <212> DNA
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<220>
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<400> 108
 gacccccgaa cgcgaccct aa

22

<210> 109
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<400> 109
 ttacaaaaaa ccttccaaat aca

23

<210> 110
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<220>
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<400> 110
 tgcacaaaac cttccgaata cg

22

<210> 111
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<220>
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<400> 111
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23

<210> 112
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<400> 112
 ttccgacttc ttccgttcg

19

<210> 113
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<220>
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<400> 113
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21

<210> 114
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<220>
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<400> 114
 ccgaaaaccc cgctctg

17

<210> 115
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<220>
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<400> 115
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21

<210> 116
 <211> 23
 <212> DNA
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<220>
 <223> Amplification primer

<400> 116
 caacttcaca aaaaaaatca atc

23

<210> 117
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<220>
 <223> Amplification primer

<400> 117
 tgtggggagt tatcgagc

18

<210> 118
 <211> 19
 <212> DNA
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<220>
 <223> Amplification primer

<400> 118
 gccttcgca aaaaaatcg

19